

A diagram of a phylogenetic tree with 19 numbered branches and four labeled tips (A, B, C, D). The tree is rooted at node 1, which leads to tip A. The tree then splits into two main lineages. The left lineage leads to a node (5) which splits into tip B (3) and a node (9). The right lineage leads to a node (6) which splits into tip C (2) and a node (10). The node (9) further splits into tip D (4) and a node (13). The node (10) further splits into tip E (1) and a node (14). The node (13) further splits into tip F (18) and a node (16). The node (14) further splits into tip G (17) and a node (15). The node (16) further splits into tip H (19) and a node (12). The node (15) further splits into tip I (8) and a node (11). The node (12) further splits into tip J (16) and a node (7). The node (11) further splits into tip K (11) and a node (10). The node (7) further splits into tip L (7) and a node (14). The node (10) further splits into tip M (10) and a node (13). The node (13) further splits into tip N (13) and a node (16). The node (16) further splits into tip O (16) and a node (19). The node (19) further splits into tip P (19) and a node (12). The node (12) further splits into tip Q (12) and a node (7). The node (7) further splits into tip R (7) and a node (14). The node (14) further splits into tip S (14) and a node (15). The node (15) further splits into tip T (15) and a node (8). The node (8) further splits into tip U (8) and a node (18). The node (18) further splits into tip V (18) and a node (3). The node (3) further splits into tip W (3) and a node (18). The node (18) further splits into tip X (18) and a node (3). The node (3) further splits into tip Y (3) and a node (18). The node (18) further splits into tip Z (18) and a node (3).

**Mpath Interactive Confidential  
Rev 1.0**

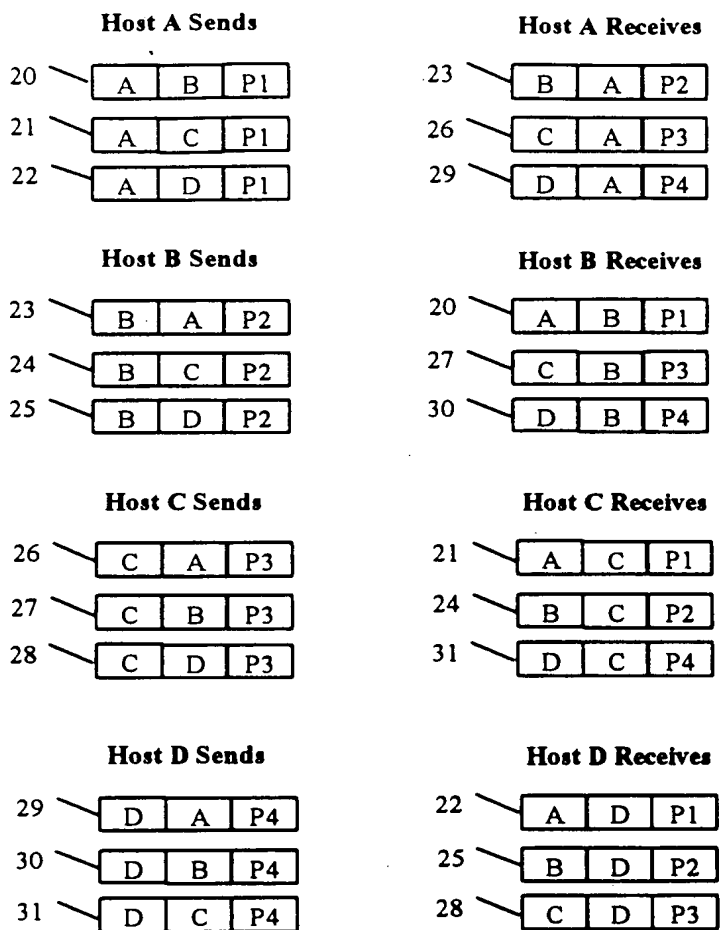


Figure 2  
Prior Art - Unicast Datagrams

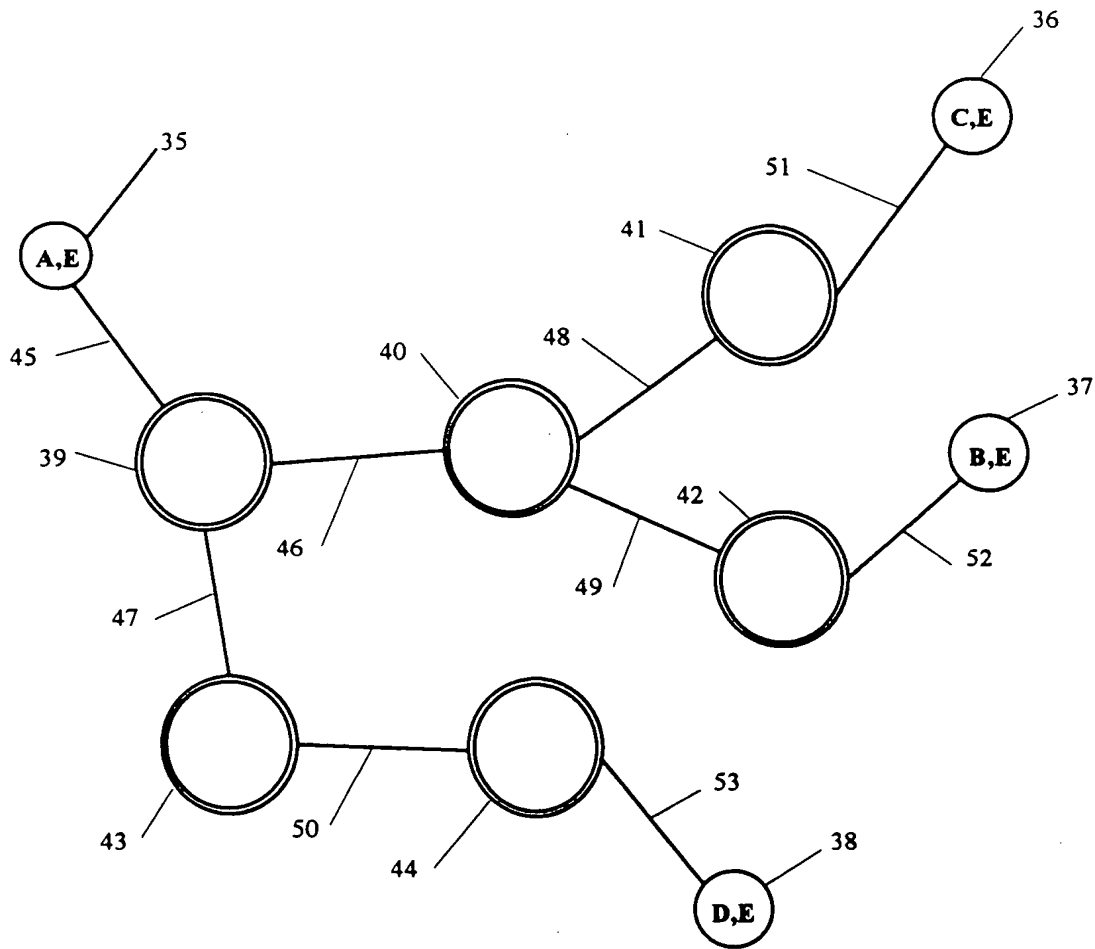


Figure 3  
Prior Art - Multicast Network

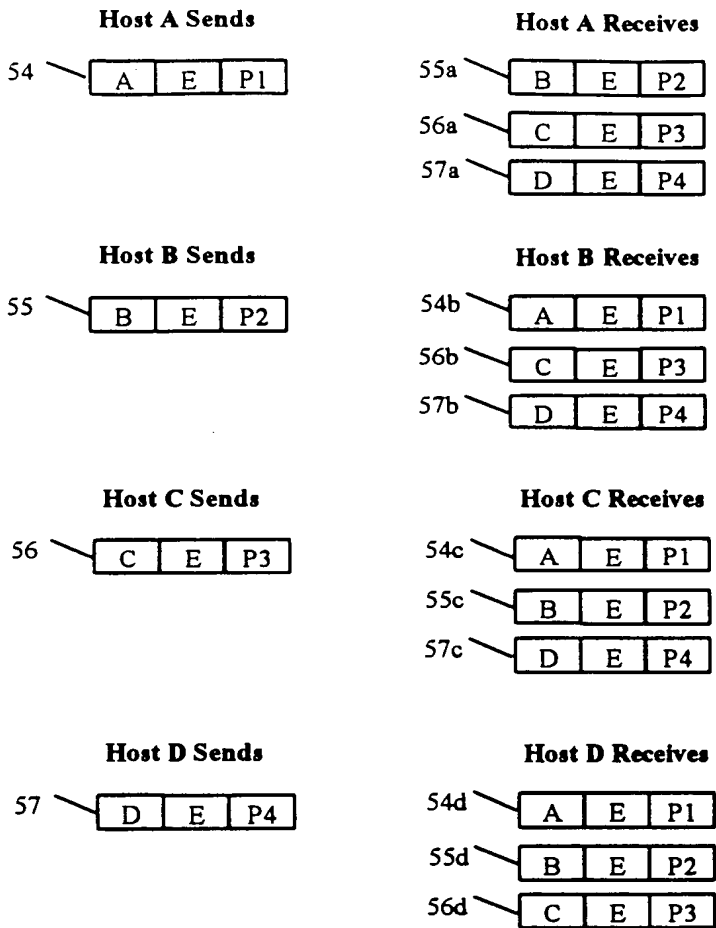
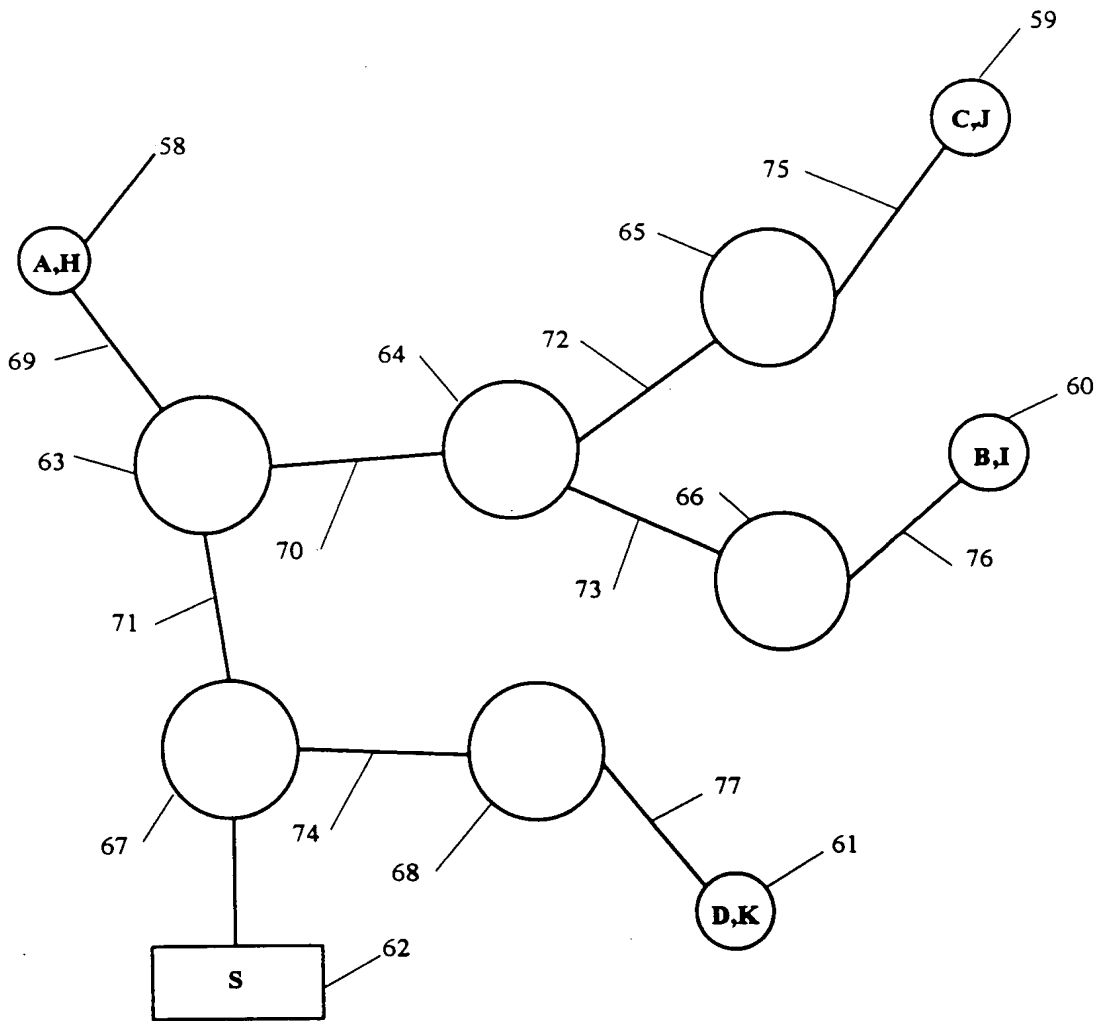
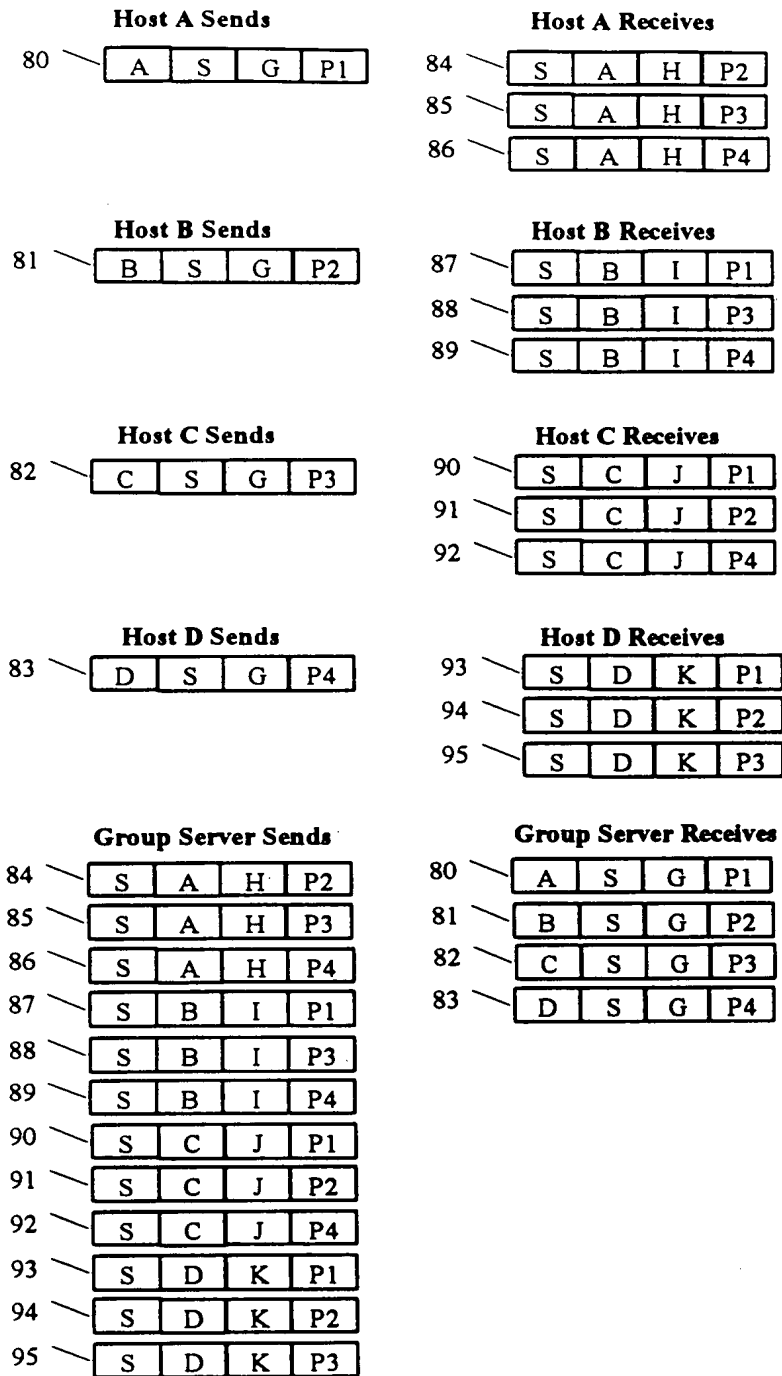


Figure 4  
Prior Art - Multicast Datagrams

66360722060



**Figure 5**  
**Present Invention - Unicast Network with Group Server**



**Figure 6**  
 Present Invention - Group Datagrams without Aggregation

66253 T220460

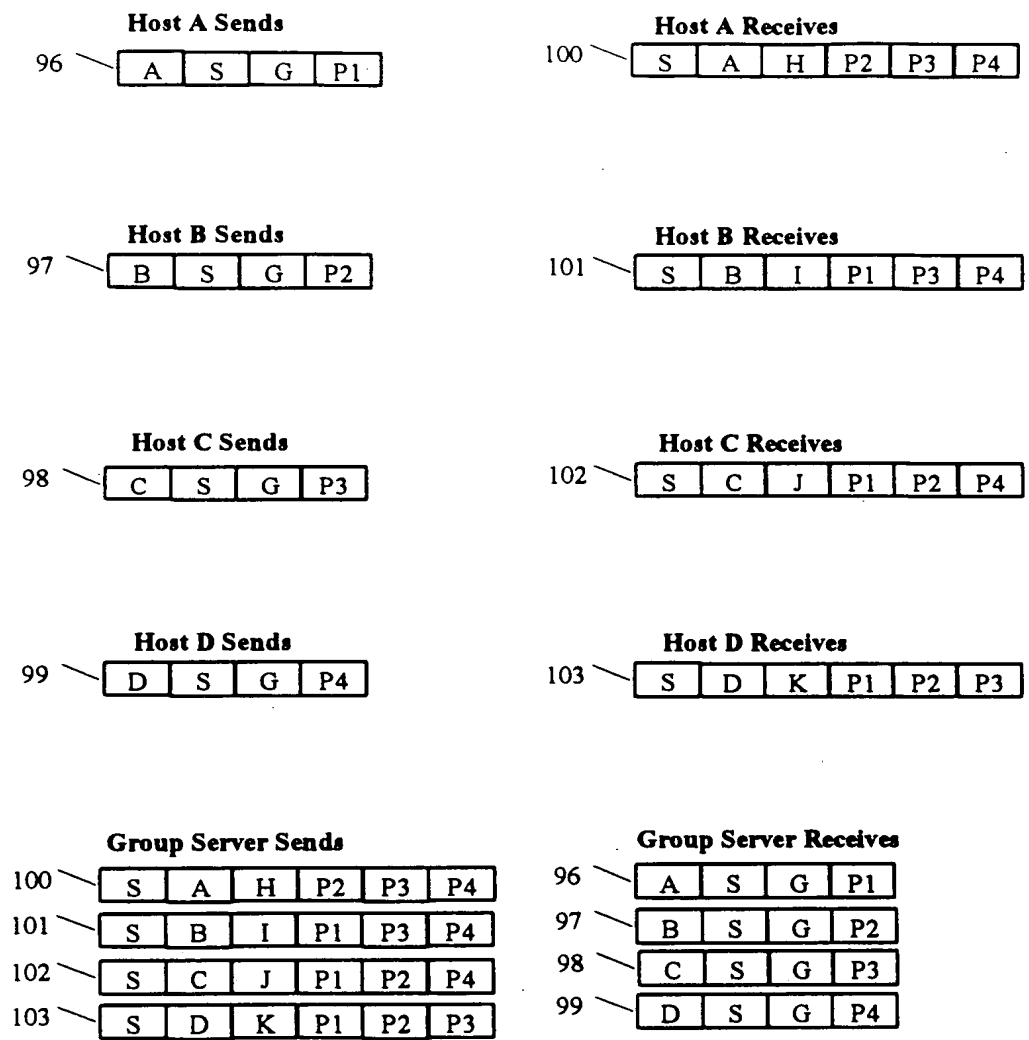
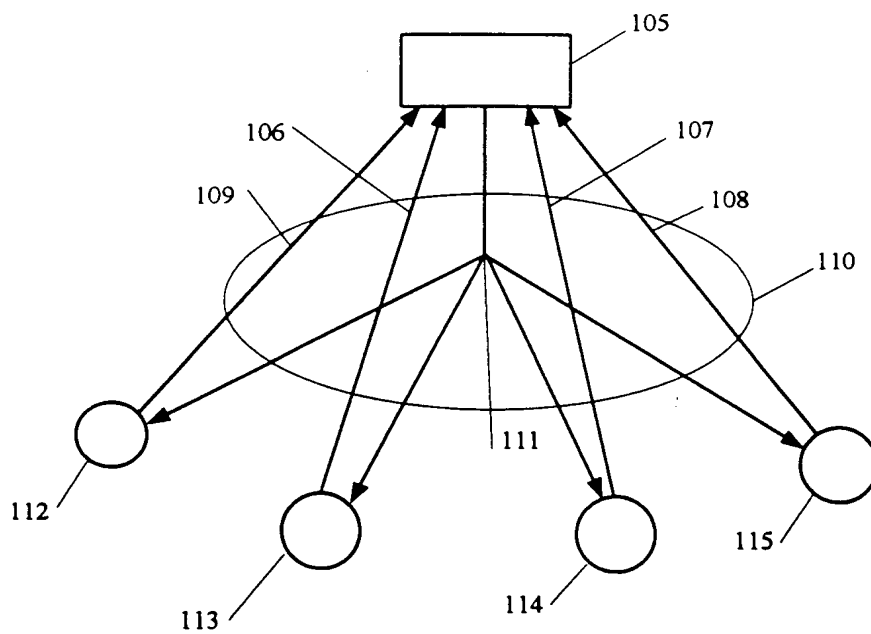
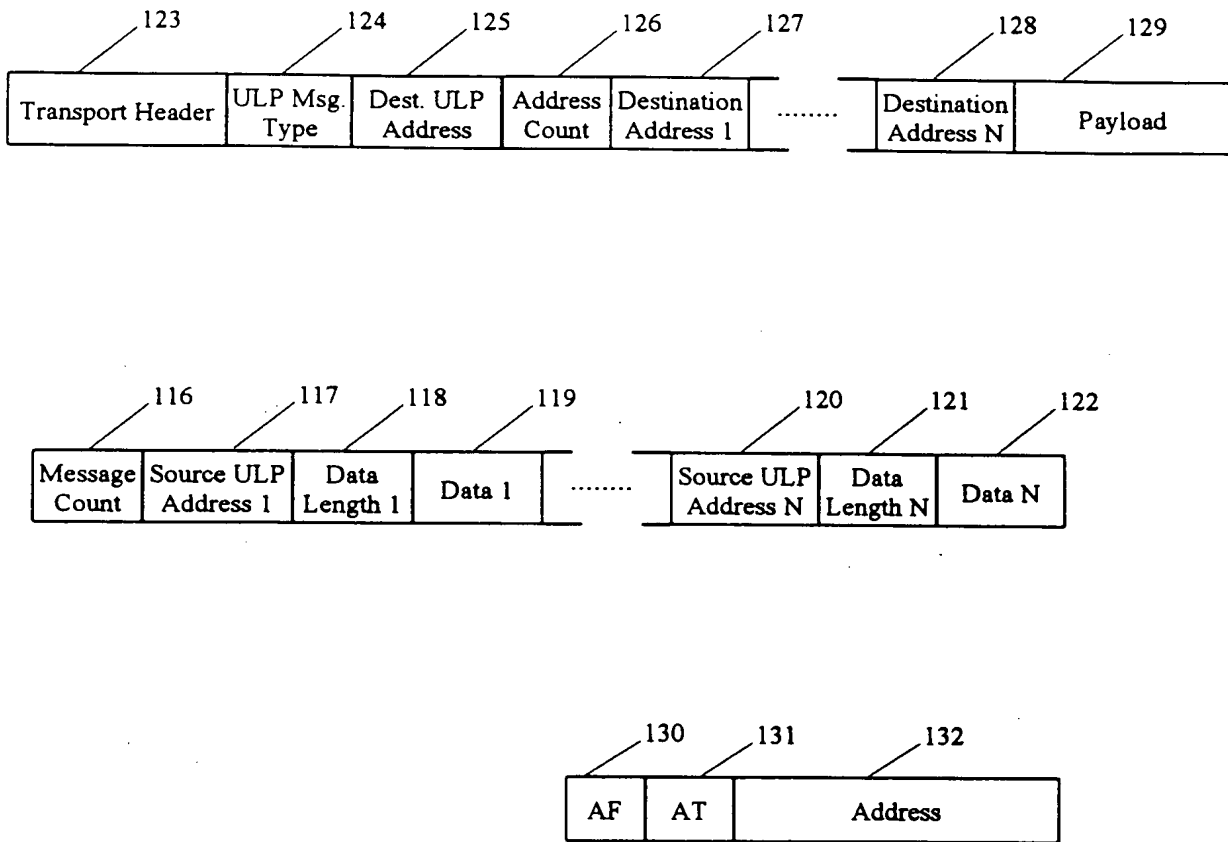


Figure 7  
Present Invention - Group Datagrams with Aggregation



**Figure 8**  
**Prior Art - ATM Network with Multicast Server**





**Figure 9**  
Invention - ULP Message and Address Formats

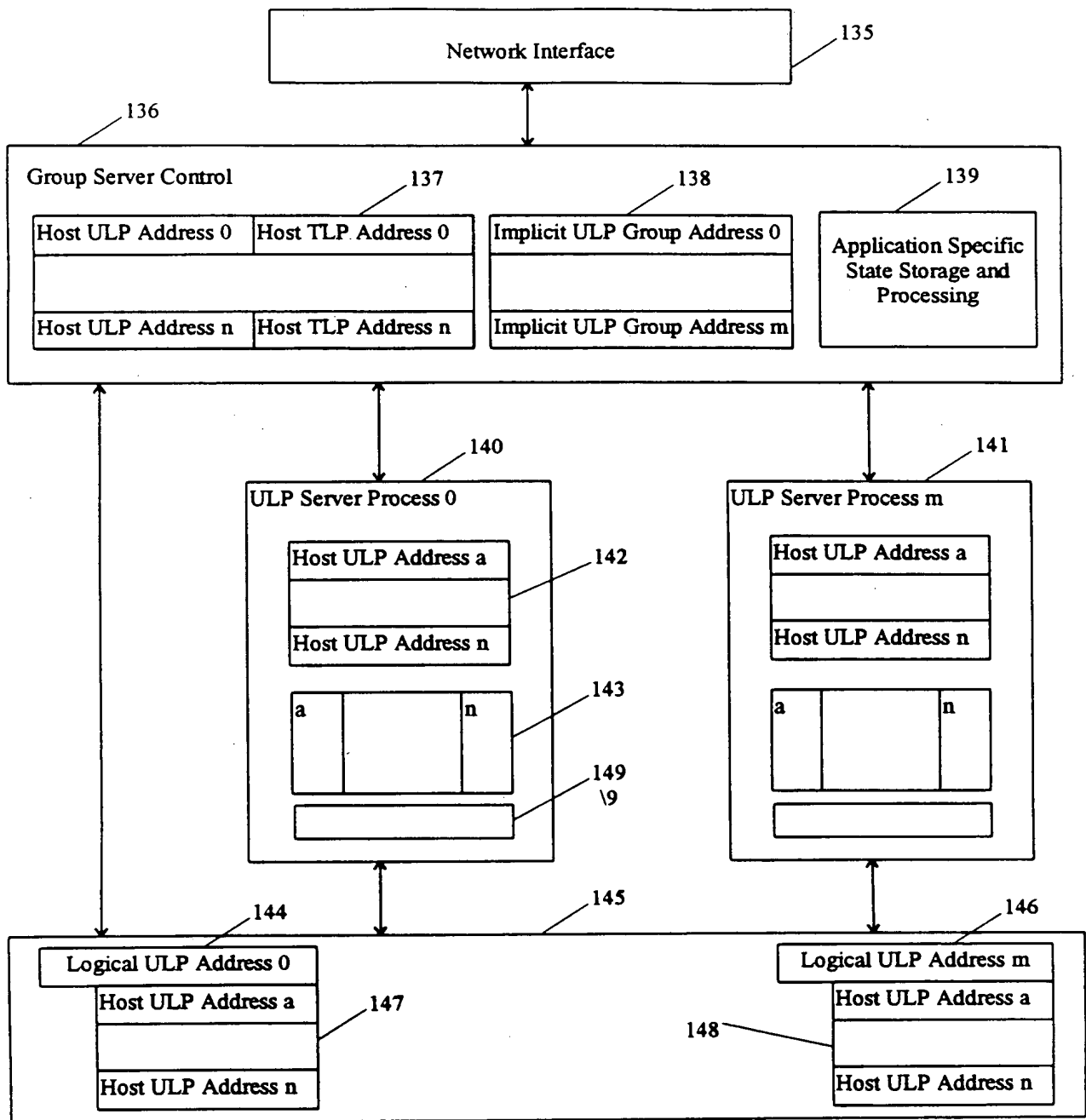


Figure 10  
Invention - Group Server Internal Functions

```

graph TD
    150[Interactive Application] <--> 153[Host Interface for Transport Level Protocol]
    151[Host Interface for Upper Level Protocol] <--> 153
    151 --- 152
    152 --- 153
    153 --- 154[Network Communications Stack]
    154 --- 155[Network Interface]

```

Figure 1 is a block diagram illustrating the Host Interface for Transport Level Protocol. The diagram shows the following components and their interconnections:

- Interactive Application (150):** The top-level component.
- Host Interface for Upper Level Protocol (151):** A component that interfaces with the Interactive Application (150) and the Host Interface for Transport Level Protocol (153). It contains a table (152) with the following structure:
 

ULP Address 0	TLP Address 0
ULP Address n	TLP Address n
- Host Interface for Transport Level Protocol (153):** A component that interfaces with the Interactive Application (150), the Host Interface for Upper Level Protocol (151), and the Network Communications Stack (154).
- Network Communications Stack (154):** A component that interfaces with the Host Interface for Transport Level Protocol (153) and the Network Interface (155).
- Network Interface (155):** The bottom-level component.

Interconnections are shown as follows:

- A bidirectional arrow connects the Interactive Application (150) and the Host Interface for Transport Level Protocol (153).
- A bidirectional arrow connects the Host Interface for Upper Level Protocol (151) and the Host Interface for Transport Level Protocol (153).
- A unidirectional arrow points from the Host Interface for Upper Level Protocol (151) to the Host Interface for Transport Level Protocol (153).
- A unidirectional arrow points from the Host Interface for Transport Level Protocol (153) to the Network Communications Stack (154).
- A unidirectional arrow points from the Network Communications Stack (154) to the Network Interface (155).

**Mpath Interactive Confidential  
Rev 1.0**